

## Clues: Roots of an Evidential Paradigm

God is in the detail. *A. Warburg*

An object which speaks of the loss, of the destruction, of the disappearance of objects. It does not speak of itself. It speaks of others. Will it also include them? *J. Johns*

In the following pages an attempt will be made to show the silent emergence of an epistemological model (a paradigm, if you prefer)<sup>1</sup> towards the end of the nineteenth century, in the humanities. Sufficient attention has not been paid to this paradigm, though it is very much operative in spite of never having become explicit theory. Such a study may help us to break out of the fruitless opposition between “rationalism” and “irrationalism.”

### I

A series of articles on Italian painting appeared in the *Zeitschrift für bildende Kunst* between 1874 and 1876. They were signed by an unknown Russian scholar, Ivan Lermolieff, and translated into German by an equally obscure Johannes Schwarze. The new method of the attribution of old masters proposed by the articles provoked conflicting reactions and lively discussions among art historians. The author then shed the twin masks, revealing himself to be the Italian Giovanni Morelli (a surname for which Schwarze is the equivalent and Lermolieff very nearly its anagram). Art historians today still speak of a “Morellian method.”<sup>2</sup>

Of what did this method consist? Museums, Morelli stated, are full of paintings with inexact attributions. But it is difficult to trace every piece to its real creator: we are frequently dealing with unsigned works which may have been touched up or are in a deteriorated condition. In these circumstances it is essential to be able to distinguish originals from copies. Yet, to accomplish this, Morelli insisted, we should not depend, as was so often the case, on the most

conspicuous characteristics of a painting, which are the easiest to imitate: eyes raised towards the heavens in the figures of Perugino, Leonardo's smiles, and so on. We should examine, instead, the most trivial details that would have been influenced least by the mannerisms of the artist's school: earlobes, fingernails, shapes of fingers and of toes. Morelli identified and faithfully catalogued by this method the shape of the ear in figures by Botticelli, Cosmé Tura, and others, traits that were present in the originals but not in copies. He ended up proposing many new attributions for works hanging in the principal European museums. Some of the new identifications were sensational: in a reclining nude in Dresden which had passed as a copy by Sassoferrato of a lost painting by Titian, Morelli identified one of the very few authentic works by Giorgione.

In spite of these results, Morelli's method was heavily criticized, in part, perhaps, because of the almost arrogant certainty with which he applied it. In time, it came to be judged mechanical, crudely positivistic, and fell into disrepute.<sup>3</sup> Still, many scholars who aligned themselves against it may have continued unobtrusively to use it in making their attributions. It is to Edgar Wind that we owe renewed interest in Morelli's writings. Wind viewed them as typical examples of the modern attitude to art, an attitude leading to the appreciation of details rather than of the work in general. Morelli represented a carrying to extremes of the cult devoted to artistic spontaneity whose ideas he had absorbed in his youth through contact with Romantic circles in Berlin.<sup>4</sup> Wind's interpretation is not very convincing, since Morelli was not concerned with aesthetic problems (a fact which was later held against him), but with problems of a preliminary philological order.<sup>5</sup> Actually, the implications of Morelli's method were of a different sort, and much more complex. We shall see how Wind himself was a hair's breadth from discovering them.

“Morelli's books,” Wind writes, “look different from those of any other writer on art; they are sprinkled with illustrations of fingers and ears, careful records of the characteristic trifles by which an artist gives himself away, as a criminal might be spotted by a fingerprint ... any art gallery studied by Morelli begins to resemble a rogue's gallery.”<sup>6</sup> This analogy was developed brilliantly by Enrico Castelnovo, who compared Morelli's presumptive method to the one ascribed, almost contemporaneously, to Sherlock Holmes by his creator, Arthur Conan Doyle.<sup>7</sup> The art connoisseur resembles the detective who discovers the perpetrator of a crime (or the artist



behind a painting) on the basis of evidence that is imperceptible to most people. There are countless examples of Holmes's shrewdness in discovering clues by means of footprints, cigarette ashes, and the like. But to be convinced of just how accurate Castelnovo's analogy is we need only to glance at "The Cardboard Box" (1892), in which Sherlock Holmes literally "morellizes." The case begins, in fact, with two severed ears sent through the mails to an innocent maiden lady. And here is the expert at work: "Holmes paused, and I [Watson] was surprised, on glancing round, to see that he was staring with singular intentness at the lady's profile. Surprise and satisfaction were both for an instant to be read upon his eager face, though when she glanced round to find out the cause of his silence he had become as demure as ever."<sup>8</sup> Later, Holmes explains to Watson (and to the reader) the course of his lightning mental process:

As a medical man, you are aware, Watson, that there is no part of the body which varies so much as the human ear. Each ear is as a rule quite distinctive, and differs from all other ones. In last year's *Anthropological Journal* you will find two short monographs from my pen upon the subject. I had, therefore, examined the ears in the box with the eyes of an expert, and had carefully noted their anatomical peculiarities. Imagine my surprise then, when, on looking at Miss Cushing, I perceived that her ear corresponded exactly with the female ear which I had just inspected. The matter was entirely beyond coincidence. There was the same shortening of the pinna, the same broad curve of the upper lobe, the same convolution of the inner cartilage. In all essentials it was the same ear. Of course, I at once saw the enormous importance of the observation. It was evident that the victim was a blood relation, and probably a very close one.<sup>9</sup>

We shall see, shortly, the implications of this parallel.<sup>10</sup> But first it may be well to look at another of Wind's valuable intuitions: "To some of Morelli's critics it has seemed odd that personality should be found where personal effort is weakest. But on this point modern psychology would certainly support Morelli: our inadvertent little gestures reveal our character far more authentically than any formal posture that we may carefully prepare."<sup>11</sup> "Our inadvertent little gestures ...": for the phrase "modern psychology" we can forthwith substitute the name of Freud. What Wind wrote about Morelli has, in fact, drawn the attention of scholars to a long-neglected passage in Freud's famous essay "The Moses of Michelangelo" (1914).<sup>12</sup> Freud began the second section by writing:

Long before I had any opportunity of hearing about psycho-analysis, I learnt that a Russian art-connoisseur, Ivan Lermolieff, had caused a revolution in the art galleries of Europe by questioning the authorship of many pictures, showing how to distinguish copies from originals with certainty, and constructing hypothetical artists for those works of art whose former supposed authorship had been discredited. He achieved this by insisting that attention should be diverted from the general impression and main features of a picture, and he laid stress on the significance of minor details, of things like the drawing of the finger-nails, of the lobe of an ear, of aureoles and such unconsidered trifles which the copyist neglects to imitate and yet which every artist executes in his own characteristic way. I was then greatly interested to learn that the Russian pseudonym concealed the identity of an Italian physician called Morelli, who died in 1891 with the rank of Senator of the Kingdom of Italy. It seems to me that his method of inquiry is closely related to the technique of psycho-analysis. It, too, is accustomed to divine secret and concealed things from unconsidered or unnoticed details, from the rubbish heap, as it were, of our observations.<sup>13</sup>

The essay on the *Moses* of Michelangelo originally appeared anonymously: Freud claimed it as his own only when he included it among his collected works. It has been supposed that Morelli's inclination to suppress his own identity as an author, concealing it under pseudonyms, may have ended up affecting even Freud; and various more or less acceptable theories have been offered on the significance of this coincidence.<sup>14</sup> What is certain is that Freud, under the veil of anonymity, acknowledged in a manner that was both explicit and reticent, the considerable intellectual influence exercised by Morelli upon him at a stage long before the discovery of psychoanalysis. To reduce this influence, as some have attempted to do, to merely the essay on Michelangelo's *Moses*, or in general terms to those essays dealing with art history,<sup>15</sup> unduly limits the scope of Freud's own words: "It seems to me that [Morelli's] method of inquiry is closely related to the technique of psycho-analysis." Instead, the entire statement by Freud from which I have just quoted assures Giovanni Morelli a special place in the early development of psychoanalysis. It is, in fact, a documented connection, not a hypothetical one, as is often the case with Freud's "antecedents" or "precursors"; moreover, the encounter with Morelli's writings occurred, as I have said, in Freud's "preanalytic" phase. We are dealing with an element, then, that contributed directly to the crystallization of psychoanalysis, and not (as in the case of the piece on the dream of J. Popper "Lynkeus" mentioned in the reprintings of



the *Traumdeutung*)<sup>16</sup> with a coincidence noted subsequently, after the discovery had been made.

Before asking what Freud might have gained by reading Morelli, we should try to pinpoint the time of this occurrence, or perhaps we should say the times, since Freud speaks of two separate encounters: “Long before I had any opportunity of hearing about psychoanalysis, I learnt that a Russian art-connoisseur, Ivan Lermolieff . . .”; “I was then greatly interested to learn that the Russian pseudonym concealed the identity of an Italian physician called Morelli . . .”

We can only guess at the date of the first statement. As a *terminus ante quem* we can suggest 1895 (the year Freud and Breuer’s *Studies on Hysteria* were published) or 1896 (when Freud used the term *psychoanalysis* for the first time).<sup>17</sup> The *terminus post quem* is 1883. In December of that year Freud mentioned in a long letter to his fiancée his “discovery of art” during a visit to the Dresden Museum. He had not been interested in art previously, but now, he wrote, “I sloughed off my barbarism and began to admire.”<sup>18</sup> It is difficult to imagine that Freud could have been interested in the writings of an unknown art historian before this date; it is perfectly plausible, instead, that he should have begun to read them not long after the letter to his fiancée about the Dresden gallery, since Morelli’s first volume of collected essays (Leipzig, 1880) dealt with works by Italian masters in the Munich, Dresden, and Berlin museums.<sup>19</sup>

Freud’s second encounter with the writings of Morelli probably can be dated with greater precision. Ivan Lermolieff’s real name was made public for the first time on the title page of the English translation of his collected articles mentioned above, which appeared in 1883; in later editions and in the translations after 1891 (the date of Morelli’s death) both his name and the pseudonym always appear.<sup>20</sup> We cannot exclude the possibility that one of these volumes, sooner or later, fell into Freud’s hands; but he may have learned of Ivan Lermolieff’s identity by pure chance in September 1898, rummaging in a Milanese bookshop. Freud’s library, now in London, contains a copy of Giovanni Morelli (Ivan Lermolieff), *Della Pittura italiana: Studii storico critici – Le Gallerie Borghese e Doria Pamphili in Roma* (Milan, 1897). The date of purchase is inscribed on the title page: Milan, September 14.<sup>21</sup> Freud’s only visit to Milan took place in the fall of 1898.<sup>22</sup> At that particular time, moreover, Morelli’s book would have interested Freud for still another reason. For several months he had been occupying himself with memory lapses: a little earlier, in Dalmatia, he had tried in vain to recall the

name of the artist responsible for the Orvieto frescoes (an episode which he later studied in *Psychopathology of Everyday Life*). Morelli’s book actually mentioned the painter (Luca Signorelli) as well as the other artists who had popped into Freud’s memory (Botticelli, G. A. Holtraffio) as possibilities.<sup>23</sup>

But what could a reading of Morelli’s essays have meant to the young Freud, still far from psychoanalysis? Freud himself tells us: it was the idea of a method of interpretation based on discarded information, on marginal data, considered in some way significant. By this method, details usually considered of little importance, even trivial or “minor,” provided the key for approaching higher aspects of the human spirit: “My adversaries,” Morelli wrote ironically (just the sort of irony that would have delighted Freud), “like to consider me a person who is unable to discern the spiritual meaning in a work of art and for this reason gives special importance to external matters, the shape of a hand, of an ear, and even, *horribile dictu*, to such an unpleasant subject as fingernails.”<sup>24</sup> Morelli could have claimed as his own that Vergilian motto so dear to Freud which he used as the epigraph for *The Interpretation of Dreams*: “Flectere si nequeo Superos, Archeronta movebo” (“If Heaven I can not bend, then Hell I will arouse”).<sup>25</sup> Moreover, to Morelli, these marginal facts were revealing because they constituted the instances when the control of the artist, who was tied to a cultural tradition, relaxed and yielded to purely individual touches “which escaped without his being aware of it.”<sup>26</sup> What is so remarkable, even more than the allusion to the unconscious,<sup>27</sup> not exceptional for the period, is the identification of the essence of artistic individuality with elements outside conscious control.

I have traced parallels between the methods of Morelli, Holmes, and Freud. I have already spoken of the connections between Morelli-Holmes and Morelli-Freud. The striking similarity between the methods of Holmes and Freud has been discussed by Steven Marcus.<sup>28</sup> Freud himself revealed his interest in the adventures of Sherlock Holmes to a patient, the “wolf-man.” But in the spring of 1913 to a colleague, Theodor Reik, who had compared the psychoanalytic method to that of Holmes, Freud spoke with admiration of the techniques attributed to Morelli. In each case, infinitesimal traces permit the comprehension of a deeper, otherwise unattainable reality: traces – more precisely, symptoms (in the case of Freud), clues (in the case of Sherlock Holmes), pictorial marks (in the case of Morelli).<sup>29</sup>



How does one explain this threefold analogy? At first glance the solution would seem very simple. Freud was a physician; Morelli had a medical degree; Conan Doyle had practiced medicine before turning to literature. In each of these cases the model of medical semiotics is evident: that discipline which permits the diagnosis of diseases inaccessible to direct observation based on superficial symptoms, sometimes thought to be irrelevant in the eyes of the layman – Dr. Watson, for example. It is worth noting, incidentally, that the duo Holmes-Watson, the perceptive detective and the obtuse physician, represents the splitting of a single real person, one of the young Conan Doyle's professors, renowned for his extraordinary diagnostic abilities.<sup>30</sup> But these are not simply biographical coincidences. Towards the end of the nineteenth century – more precisely in the decade 1870-80 – a presumptive paradigm began to assert itself in the humane sciences that was based specifically on semiotics. Its roots, however, were much older.

## II

Man has been a hunter for thousands of years. In the course of countless chases he learned to reconstruct the shapes and movements of his invisible prey from tracks on the ground, broken branches, excrement, tufts of hair, entangled feathers, stagnating odors. He learned to sniff out, record, interpret, and classify such infinitesimal traces as trails of spittle. He learned how to execute complex mental operations with lightning speed, in the depth of a forest or in a prairie with its hidden dangers.

This rich storehouse of knowledge has been passed down by hunters over the generations. In the absence of verbal documentation to supplement rock paintings and artifacts, we can turn to folklore, which transmits an echo, though dim and distorted, of the knowledge accumulated by those remote hunters. An oriental fable that circulated among Kirghiz, Tartars, Jews, Turks, and others relates the story of three brothers who meet a man who has lost a camel or, in variant versions, a horse.<sup>31</sup> They describe it for him without hesitation: it is white, blinded in one eye, and carries two goat-skins on its back, one full of wine, the other of oil. Then they have seen it? No, they have not. So they are accused of stealing and brought to trial. For the brothers, this is a moment of triumph: they demonstrate in a flash how, by means of myriad small clues, they could reconstruct the appearance of an animal on which they have never laid eyes.

Obviously, the three brothers are repositories of some sort of venatic lore, even if they are not necessarily hunters. This knowledge is characterized by the ability to construct from apparently insignificant experimental data a complex reality that could not be experienced directly. Also, the data is always arranged by the observer in such a way as to produce a narrative sequence, which could be expressed most simply as "someone passed this way." Perhaps the actual idea of narration (as distinct from charms, exorcisms, or invocation)<sup>32</sup> may have originated in a hunting society, relating the experience of deciphering tracks. This obviously undemonstrable hypothesis nevertheless seems to be reinforced by the fact that the rhetorical figures on which the language of venatic deduction still rests today – the part in relation to the whole, the effect in relation to the cause – are traceable to the narrative axis of metonymy, with the rigorous exclusion of metaphor.<sup>33</sup> The hunter would have been the first "to tell a story" because he alone was able to read, in the silent, nearly imperceptible tracks left by his prey, a coherent sequence of events.

"To decipher" or "to read" animal tracks are metaphors. We have tried, however, to take them literally, as the verbal condensation of a historical process which brought us, perhaps over a long span of time, to the invention of writing. The same sort of connection has been articulated, in the guise of an aetiological myth, by Chinese tradition, which attributes the invention of writing to a high official who had observed bird tracks on the sandy banks of a river.<sup>34</sup> On the other hand, if we abandon the realm of myths and hypotheses for that of documented history, we are struck by the undeniable analogies between the venatic model just discussed and the paradigm implicit in the Mesopotamian divination texts, which began to be composed in the third millennium B.C.<sup>35</sup> Both presuppose the minute investigation of even trifling matters, to discover the traces of events that could not be directly experienced by the observer. Excrement, tracks, hairs, feathers, in one case; animals' innards, drops of oil on the water, heavenly bodies, involuntary movements of the body, in the other. Granted that the second series, as opposed to the first, was virtually limitless in the sense that practically everything was grist for the work of the Mesopotamian diviners. But the principal difference between them is something else: divination looked to the future and the interpretation of venatic clues to the past (perhaps a past only instantly old). And yet there were great similarities in the learning process between the two; the intellectual operations involved – analyses, comparisons, classifications – were formally identical. Only formally, to be sure; the social context was



totally different. It has been noted, in particular, how profoundly the invention of writing shaped Mesopotamian divination.<sup>36</sup> In fact, among other royal prerogatives, the power to communicate with their subjects by means of messages was attributed to the gods – messages written in the heavens, in human bodies, everywhere – which the divines had the task of deciphering (a notion destined to issue in that ageless image of the “book of nature”). And the identification of soothsaying with the deciphering of divine characters inscribed in reality was reinforced by the pictorial features of cuneiform writing: like divination, it too designated one thing through another.<sup>37</sup>

Even a footprint indicates an animal’s passing. In respect to the concreteness of the print, of a mark materially understood, the pictogram already represents an incalculable step forward on the road towards intellectual abstraction. But the abstract capacities presupposed by the introduction of pictographic writing are, in turn, of small consequence next to those required for the transfer to phonetic writing. Actually, pictographic and phonetic elements continued to coexist in cuneiform writing, just as in Mesopotamian divination literature the increasing tendency to generalize deductively did not cancel out the fundamental ability to infer causes from their effects.<sup>38</sup> This explains both the way in which technical terms taken from a legal vocabulary infiltrated the Mesopotamian language of divination, and the presence of passages dealing with medical physiognomy and semiotics in divination treatises.<sup>39</sup>

Thus, we have returned to semiotics. We find it included in a constellation of disciplines (although the term is obviously anachronistic) which have a common feature. It might be tempting to juxtapose two pseudosciences, divination and physiognomics, with sciences such as law and medicine, ascribing the disparity in such a comparison to the spatial and temporal distance of the societies under discussion. But this would be a superficial conclusion. Something did indeed link these different methods of seeking knowledge in ancient Mesopotamia (if we exclude divination by inspiration, which was based on experiences of an ecstatic type):<sup>40</sup> it was an attitude oriented towards the analysis of specific cases which could be reconstructed only through traces, symptoms, and clues. Mesopotamian legal texts themselves did not consist of collections of laws or ordinances but of discussions of concrete examples.<sup>41</sup> Consequently, we can speak of a presumptive or divinatory paradigm, directed, depending on the forms of knowledge, towards the past, present, or future. For the future, there was divination in a strict sense; for the past, the present, and the future, there was

medical semiotics in its twofold aspect, diagnostic and prognostic; for the past, there was jurisprudence. But behind this presumptive or divinatory paradigm we perceive what may be the oldest act in the intellectual history of the human race: the hunter squatting on the ground, studying the tracks of his quarry.

What I have been saying explains how a diagnosis of cranial trauma reached on the basis of bilateral squint could turn up in a Mesopotamian treatise on divination.<sup>42</sup> More generally, it explains historically how an array of disciplines could emerge which centered on the deciphering of signs of various kinds, from symptoms to writing. Passing from Mesopotamia to Greece this constellation changed profoundly, following the birth of such new disciplines as historiography and philology, and a new social and epistemological autonomy in medicine and other ancient disciplines. The body, language, and human history for the first time were exposed to objective examination, which on principle excluded divine intervention. We are still today the heirs of this decisive turning-point in the culture of the *polis*. It may be less obvious that in this transformation, a paradigm definable as semiotic or presumptive played a primary role.<sup>43</sup> It is especially evident in the case of Hippocratic medicine, where the definition of its chosen method depended on the explicit notion of symptom (*semeion*). The Hippocratic school maintained that only by attentively observing and recording all symptoms in great detail could one develop precise “histories” of individual diseases; disease, in itself, was out of reach. This emphasis on the presumptive nature of medicine was probably inspired by the contrast, pointed out by the Pythagorean physician Alcmeon, between the immediacy of divine knowledge and the speculative nature of human perception.<sup>44</sup> A conjectural paradigm operating on diverse levels found its implicit justification in the denial that reality is transparent. Physicians, historians, politicians, potters, carpenters, sailors, hunters, fishermen, women: for the Greeks these were only some of the groups dealing in that vast world of conjectural knowledge. Its borders – governed, significantly, by the goddess Metis, Jove’s first wife, who personified divination by aqueous means – were marked by such terms as “conjecture” and “speculate” (*tekmor, tekmairesthai*). But as I have stated, this paradigm remained implicit – suppressed by the prestigious (and socially higher) model of knowledge developed by Plato.<sup>45</sup>

The defensive tone of certain passages in the Hippocratic corpus<sup>46</sup> indicates that as early as the fifth century B.C., the polemic against the



uncertainties of medicine, destined to last into our own day, had already begun. This continuum is explained by the fact that relations between doctor and patient, characterized by the latter's inability to verify the knowledge and authority professed by the former, have not changed much since the time of Hippocrates. But the terms of the controversy, together with the profound transformation experienced by the idea of "rigor" and "science," have changed in the course of almost two and a half millennia. Obviously, the decisive point is constituted by the appearance of a scientific paradigm based on Galileian physics, but one which turned out to be more durable than it. Even if modern physics cannot call itself "Galileian" (although it has not rejected Galileo), his epistemological and even symbolic significance for science in general has remained intact.<sup>47</sup>

It should be clear by now that the group of disciplines which we have called evidential and conjectural (medicine included) are totally unrelated to the scientific criteria that can be claimed for the Galileian paradigm. In fact, they are highly qualitative disciplines, in which the object is the study of individual cases, situations, and documents, precisely *because they are individual*, and for this reason get results that have an unsuppressible speculative margin: just think of the importance of conjecture (the term itself originates in divination)<sup>48</sup> in medicine or in philology, and in divining. Galileian science, which could have taken as its own the Scholastic motto *Individuum est ineffabile* ("We cannot speak about what is individual"), is endowed with totally different characteristics. Mathematics and the empirical method implied, respectively, quantification and the repetition of phenomena, while the individualizing perspective by definition excluded the latter and admitted the former only as mere instrument. All this explains why history never became a Galileian science. It was during the seventeenth century, in fact, that the grafting of antiquarian methods to historiography indirectly revealed the remote conjectural origins of the latter, hidden for centuries.

This original feature has not changed despite the ever-closer links between history and the social sciences. History has stayed a social science *sui generis*, forever tied to the concrete. Even if the historian is sometimes obliged to refer back, explicitly or implicitly, to a sequence of comparable phenomena, the cognitive strategy, as well as the codes by which he expresses himself, remain intrinsically individualizing (although the individual case may be a social group or an entire society). In this respect the historian is like the physician who uses nosographical tables to analyze the specific sickness in a patient. As with the physician's, historical knowledge is indirect, presumptive, conjectural.<sup>49</sup>

But our hypothesis is too orderly. In the realm of conjectural disciplines, one – philology, or more precisely, textual criticism – has from its very emergence presented certain atypical characteristics.

Its objective, in fact, took shape through a process of drastic selection of the pertinent characteristics, later to be reduced even further. This internal curtailing of the discipline was expressed by two decisive historical milestones: the inventions of writing and of printing. Textual criticism originated as a consequence of the first (when the decision was taken to transcribe the Homeric poems) and became well established after the second (when the earliest, often hurriedly produced editions of the classics were replaced by more reliable ones).<sup>50</sup> At first, all the elements tied to orality and gesture and later even those tied to the physical characteristics of writing were thought to be irrelevant to the text. This twofold process resulted in a progressive dematerialization of the text, which was gradually purified at every point of reference related to the senses; even though a material element is required for a text's survival, the text itself is not identified by that element.<sup>51</sup> All this seems obvious today, but actually it isn't at all. One need only think of the crucial function played by intonation in oral literature, or by calligraphy in Chinese poetry, to realize that the concept of text I have just mentioned is tied to an extremely significant cultural choice. That this selection was not determined by the mere substitution of mechanical for manual means of reproduction is demonstrated by the well-known example of China, where the invention of printing did not break the link between literary text and calligraphy. We shall see shortly how the problem of pictorial "texts" historically has been expressed in radically different terms.

The abstract notion of text explains why textual criticism, even while retaining to a large extent its divinatory qualities, had the potential to develop in a rigorously scientific direction, as in fact occurred in the course of the nineteenth century.<sup>52</sup> The radical conception of considering only the portions of a text which could be reproduced (first manually and later, after Gutenberg, mechanically) meant that, even while dealing with individual cases,<sup>53</sup> one avoided the principal pitfall of the humane sciences: quality. Significantly, Galileo turned to philology in the very moment that he was founding modern natural science through an equally drastic reduction. The traditional medieval juxtaposition of world and book was based on evidence that both were immediately decipherable, while Galileo, instead, stressed that "philosophy ... written in this great book which is always open before our eyes (I call it the universe) ... cannot be understood if we do not first



learn the language and the characters in which it is written,” namely, “triangles, circles and other geometrical figures.”<sup>54</sup> For the natural philosopher as for the philologist, the text is a profound, invisible entity to be reconstructed independently of material data: “figures, numbers and movements, but not smell, nor tastes, nor sounds, *which I do not believe are anything more than names outside the living animal.*”<sup>55</sup>

With these words Galileo set natural science on the anti-anthropocentric and anti-anthropomorphic direction which it would never again abandon. A gap had opened in that world of knowledge, one destined to enlarge with the passing of time. And, to be sure, there could be no greater contrast than between the Galileian physicist professionally deaf to sounds and insensitive to tastes and odors, and his contemporary, the physician, who hazarded diagnoses by placing his ear on wheezy chests or by sniffing at feces and tasting urine.

The Sienese Giulio Mancini, the personal physician of Urban VIII, was one of these men. There is no evidence that he knew Galileo personally, but it is quite likely that the two met because they belonged to the same Roman circles (from papal court to Academy of the Lincei) and knew many of the same people (from Federico Cesi to Giovanni Ciampoli and Giovanni Faber).<sup>56</sup> Nicio Eritreo (Gian Vittorio Rossi), in an extremely lively sketch, outlined Mancini’s atheism, his extraordinary diagnostic abilities (described in terms drawn from the language of divination), and his willingness to extort from his patients paintings about which he was “intelligentissimus.”<sup>57</sup> Mancini had, in fact, written a work entitled *Alcune considerazioni appartenenti alla pittura come di diletto di un gentilhuomo nobile e come introduzione a quello si deve dire*, which circulated widely in manuscript form but did not actually appear in print until a little over three decades ago.<sup>58</sup> As the title indicates, the book had not been written for painters but for gentlemanly dilettantes – those *virtuosi* who were flocking in ever greater numbers to the exhibitions of ancient and modern paintings being held yearly at the Pantheon on the nineteenth of March.<sup>59</sup> Without this artistic market, Mancini might never have written what was probably the newest element in his *Considerazioni*, the part devoted to the “recognition of painting” – to the methodology, in other words, for identifying fakes, distinguishing originals from copies, and so on.<sup>60</sup> The first attempt to establish connoisseurship (as it would come to be called a century later) can be traced back, then, to this physician celebrated for his lightning diagnoses, a man who, confronted by a patient, could divine with a rapid glance “what would be the outcome of the sickness” (“quem exitum

morbus ille esset habiturus”).<sup>61</sup> At this point it may be permissible to see in this fusion of the clinician’s and connoisseur’s eye something more than a simple coincidence.

Before looking more closely at some of Mancini’s arguments, we should note a premise shared by him, the “noble gentleman” to whom the *Considerazioni* were addressed, and ourselves. The premise is an unstated one because it has been held (wrongly) to be self-evident: namely, that between a canvas by Raphael and a copy (be it a painting, an engraving, or, today, a photograph) a difference exists that is impossible to eliminate. The commercial implications of this assumption that a painting is by definition unique and impossible to reproduce are obvious.<sup>62</sup> They are connected to the appearance of the connoisseur as a social figure. But the premise springs from a cultural selection which is anything but predictable, as demonstrated by the fact that it is not applicable to written texts. The presumed eternal characteristics of painting and literature do not enter into this. We have already mentioned the historical developments through which the notion of written text became purified of traits not considered pertinent. This refinement has not – yet – taken place in the case of painting. To our eyes, manuscript copies or printed editions of the *Orlando Furioso* can reproduce the text as Ariosto wanted it; copies of a portrait by Raphael, never.<sup>63</sup>

The different status accorded to copies in painting and in literature explains why Mancini, as connoisseur, could not use the methods of textual criticism, even while establishing a general analogy between the acts of painting and writing.<sup>64</sup> And with this analogy as a starting point, he was obliged to look for help to other budding disciplines.

The first goal that Mancini set for himself concerned the dating of paintings. In pursuing it, he stated that it was essential to have “a certain practice learning about the variety of paintings and their periods, just as antiquarians and librarians know letters, from which they deduce the epoch of the writing.”<sup>65</sup> The allusion to knowledge of letters has to refer to methods worked out in those very years by Leone Allacci, Vatican librarian, for the dating of Greek and Latin manuscripts – methods that would be further developed a half century later by the founder of paleography, Mabillon.<sup>66</sup> But, Mancini continued, “in addition to the properties common to the century,” there also exist “properties that belong to the individual,” as “we see these distinctive characteristics in writers.” So the analogy between painting and writing, first proposed on a macroscopic scale (“ages,” “century”), was subsequently restated on a microscopic, individual level. In this sphere



Allaci's protopaleographical methods did not work. These very years, however, saw an isolated effort to analyze individual scripts from an unusual vantage point. The physician Mancini, citing Hippocrates, observed that it might be possible to move from "functions" to "impressions" of the soul, which in turn are rooted in the "properties" of individual bodies: "through which and with which supposition I believe certain fine minds in this century of ours have written down and attempted to establish a rule for discerning the intellect and intelligence of others in the handwriting of one man or another."

The Bolognese physician, Camillo Baldi, must have been one of these "fine minds." His *Trattato come da una lettera missiva si conoscano la natura e qualità dello scrittore* contained a chapter, the sixth, which can be considered the oldest European text on handwriting. It was entitled "What Meaning Can Be Read into the Representation of the Character," where "character" designated "the figure and the drawing of the letter as it is executed by pen on paper."<sup>67</sup> But in spite of his initial enthusiasm, Mancini lost interest in the stated purpose of the new graphology and the reconstruction of writers' personalities accomplished by going from their written "characters" (i.e., letters) to their psychological "character" (a synonymy which takes us back to a single, remote disciplinary matrix). Mancini paused, instead, on the initial premise of the new discipline: individual handwritings differed and were impossible to imitate. By identifying equally inimitable elements in painting he might have been able to achieve his object, namely the development of a method which would permit the separation of originals from fakes, works by great masters from copies or the productions of their followers. All this explains his exhortation to determine whether

one can discern in paintings the master's boldness, especially in those parts which of necessity are done deliberately and cannot easily be imitated, as is the case especially with hair, beards, and eyes. Ringlets in the hair can only be imitated with difficulty, and it becomes apparent in the copy; and if the copyist does not want to imitate them, then they will lack the master's perfection. And these features in a painting are like strokes and flourishes in handwriting, which require the master's boldness and resolution. The same can be said about bold strokes of brilliance which the artist executes with masterful touches impossible to imitate, as in the folds of clothing and reflected light, which depend more on the artist's fantasy than on the actual reality of the object.<sup>68</sup>

So we can see that the parallel between acts of writing and painting previously discussed by Mancini in various contexts is reexamined in this passage from a new and unprecedented point of view (with the

exception of a passage by Filarete which Mancini may not have known).<sup>69</sup> The analogy is emphasized by the use of such technical terms recurring in contemporary handwriting treatises as "boldness," "strokes," "flourishes."<sup>70</sup> This is also the origin of the insistence on "speed": in an increasingly bureaucratic age, the characteristic guaranteeing success for a chancery cursive on the copyist's market was, besides elegance, the swiftness of the *ductus*.<sup>71</sup> In general, the importance Mancini attributed to decorative elements testifies to the serious attention he was paying to the salient features of Italian handwriting models prevailing from the late sixteenth to the early seventeenth centuries.<sup>72</sup> The study of written "characters" revealed that the identification of a master's hand should be looked for in the parts of a painting executed most rapidly, and thus potentially freed from the representation of reality (tangles of hair, cloth "which depend more on the artist's fantasy than on the actual reality of the object"). We shall return to the riches buried in these statements – riches that neither Mancini nor his contemporaries were able to bring to the surface.

"Characters." This word reappears in its proper or analogical sense about 1620, in writings by the founder of modern physics on the one hand, and in the works of the originators of paleography, graphology, and connoisseurship, on the other. To be sure, only a metaphorical relationship existed between the disembodied "characters" read by Galileo in the book of nature through the eyes of the brain,<sup>73</sup> and those materially deciphered by Allacci, Baldi, or Mancini on paper and parchment, canvas, or tablets. But the identity of terms brings up once again the heterogeneity of the disciplines which I have juxtaposed. Their scientific value, in the Galileian sense of the term, decreased abruptly as one passed from the universal "properties" of geometry to "properties common to the century" in writing and then to the "individual properties" of paintings – or even calligraphy.

This descending scale confirms that the real obstacle to the application of the Galileian paradigm was the centrality (or the lack of it) of the individual element in the single disciplines. The more that individual traits were considered pertinent, the more the possibility of attaining exact scientific knowledge diminished. Of course, the preliminary decision to neglect individual features did not in itself guarantee that physico-mathematical methods could be applied, and without them there could be no talk of adopting the Galileian paradigm in a strict sense. But at least in that case it was excluded without more ado.



At this juncture two roads were open: either sacrifice knowledge of the individual element for generalizations (more or less scientific, more or less capable of being formulated in mathematical terms) or attempt to develop, even if tentatively, a different paradigm, founded on scientific knowledge of the individual ... but a body of knowledge yet to be defined. The first course was taken by the natural sciences, and only much later by the so-called humane sciences. The reason for this is clear. The tendency to obliterate the individual traits of an object is directly proportional to the emotional distance of the observer. In his *Trattato di Architettura* Filarete declared that it was impossible to create two perfectly identical buildings, just as Tartars' "snouts are made alike, or indeed Ethiopians are all black, and yet if you examine them closely have differences alongside the similarities." He did admit, however, that "many animals do resemble one another, such as flies, ants, worms, frogs and many fish so that members of the species cannot be told apart one from the other."<sup>74</sup> In the eyes of a European architect, even the slight differences between two edifices (European) were significant, those between two Tartars or Ethiopians were negligible, and those between two worms or two ants, actually nonexistent. A Tartar architect, an Ethiopian ignorant of architecture, or an ant would have suggested different hierarchies. Individualizing knowledge is always anthropocentric, ethnocentric, and so on. Of course, even animals, minerals, or plants could be viewed from an individualizing perspective – that of divination, for instance<sup>75</sup> – especially in cases clearly outside the norm. Teratology, as we know, was an important component of divining. But in the early decades of the seventeenth century even the indirect influence of a model such as the Galileian tended to subordinate the study of anomalous phenomena, such as divination, to investigation of the norm, to furthering the general knowledge of nature. In April 1625 a two-headed calf was born in the outskirts of Rome. The naturalists in the Academy of the Lincei became interested in the case. It was the topic of conversations in the Vatican gardens of the Belvedere between Giovanni Faber, the academy's secretary, Ciampoli (both, as we have seen, close to Galileo), Mancini, Cardinal Agostino Vegio, and Urban VIII. The first question they asked was the following: Was the bicephalous calf one or two animals? For physicians it is the brain that distinguishes the individual; for Aristotelians, it is the heart.<sup>76</sup> In Faber's account we can probably detect an echo of the participation of Mancini (the only medical man present at the discussions). So, in spite of his

astrological interests,<sup>77</sup> he analyzed the specific characteristics of the monstrous birth, not for the purpose of foretelling the future but, rather, to achieve a more precise definition of the normal individual, who, as a representative of a species, could reasonably be considered a repeatable phenomenon. With the same attention which he was accustomed to dedicate to paintings, Mancini pored over the anatomy of the two-headed calf. But the analogy with his activity as connoisseur ended here. In a sense, he personified the linking of the divinatory paradigm (Mancini the diagnostician and connoisseur) and the generalizing paradigm (Mancini the anatomist and naturalist) yoked together, but each of different origin. Despite appearances, the precise description of the autopsy performed on the calf, recorded by Faber, and the detailed engravings of the animal's internal organs which accompanied it<sup>78</sup> were not intended to reveal the "individual properties" of the object as such, but to reach beyond them to "the common properties" of the species (which in this case were natural rather than historical). The naturalistic tradition going back to Aristotle was thereby revived and sharpened. Sight, symbolized by the sharp-eyed lynx on the shield of Federico Cesi's academy, became the privileged function of those disciplines excluded from the suprasensorial eye of mathematics.<sup>79</sup>

The humane sciences (as we would call them today) were at least ostensibly represented among these disciplines, primarily for their tenacious anthropocentrism, expressed with such naïveté in the quotation from Filarete. And yet there were attempts to introduce the mathematical method even in the study of what was most human.<sup>80</sup> Understandably, the first and most successful, carried out by the political arithmeticians, assumed as its subject human events that were most affected by biology: birth, procreation, and death. This drastic reductionism permitted rigorous inquiry, and at the same time served the requirement for information in the areas of the military or finance of absolute states, oriented as they were, and given the scale of their operations, in an exclusively quantitative direction. But the indifference to qualitative matters of those who used the new science of statistics did not entirely cause it to break its ties with that circle of disciplines which we have dubbed conjectural. The calculation of probability, as the title of Bernoulli's classic work, *Ars conjectandi*, tells us, was an attempt to give a mathematically exact formulation to problems which had also confronted divination in a radically different form.<sup>81</sup>



But the humane sciences as a whole remained firmly anchored to the qualitative, though not without some uneasiness, especially in the case of medicine. In spite of advances, its methods seemed doubtful, its results questionable. A work such as Cabanis's *The Certainty of Medicine*, published towards the end of the eighteenth century, recognized this lack of accuracy, even as it strove to acknowledge a scientific character of its own in medicine.<sup>82</sup> There seemed to be basically two reasons for this "uncertainty." First, it was not enough to catalogue individual diseases so that they would fit into an orderly scheme: in every individual a disease assumed different characteristics. Second, knowledge of diseases remained indirect and conjectural: by definition, the living body was beyond reach. To be sure, the cadaver was dissectable: but how could one's steps be traced from it, already impaired by death, to the characteristics of the living individual?<sup>83</sup> In the face of this twofold difficulty it was inevitably recognized that the efficacy of medical procedures was not subject to proof. In conclusion, the inability of medicine to achieve the exactness of the natural sciences stemmed from the impossibility to quantify, except with purely auxiliary functions. And the impossibility of quantifying was due to the unavoidable presence of what was qualitative, of the individual; and the presence of the individual was indebted to the fact that the human eye is more sensitive to differences (even marginal ones) between human beings than those between rocks or leaves. The future epistemological essence of the humane sciences was already being formulated in these discussions on the "uncertainty" of medicine.

An understandable impatience can be read between the lines of Cabanis's book. In spite of the more or less justifiable objections which could be directed against medicine on the methodological plane, it remained fully recognized as a science from the point of view of society. But in this period not all forms of conjectural knowledge benefited from similar prestige. Some, such as connoisseurship, which was relatively recent, occupied an ambiguous position on the periphery of the recognized disciplines. Others, more closely tied to daily life, actually remained outside. The ability to identify a defective horse by the condition of his hocks, an impending storm by sudden changes in the wind, a hostile intention in a sudden change of expression, was certainly not to be learned from a farrier's manual or meteorological or psychological treatises. Knowledge of this sort in each instance was richer than any written codification; it was learned not from books but from the living voice, from gestures and glances;

it was based on subtleties impossible to formalize, which often could not even be translated into words; it constituted the patrimony, partly unitary, partly diversified, of men and women from all social classes. These insights were bound by a subtle relationship: they had all originated in concrete experience. The force behind this knowledge resided in this concreteness, but so did its limitation – the inability to make use of the powerful and terrible weapon of abstraction.<sup>84</sup>

Written culture had for a considerable period of time attempted to give a precise verbal formulation for this body of local knowledge that was without origin, memory, or history.<sup>85</sup> By and large, the results were dull and impoverished. Just think of the abyss separating the schematic rigidity of the physiognomy treatises from the flexible and rigorous insight of a lover or a horse trader or a card shark. Only in the case of medicine, perhaps, had the written codification of conjectural knowledge resulted in real enrichment (although the history of the relationship between learned and popular medicine remains to be written). In the course of the eighteenth century the situation changed. An out-and-out cultural offensive by the bourgeoisie appropriated for itself much of the knowledge, conjectural and nonconjectural alike, of artisans and peasants, codifying it and thereby intensifying a gigantic process of acculturation begun earlier (obviously in a different guise) by the Counter-Reformation. The *Encyclopédie*, naturally, is the symbol and chief instrument in this offensive. However, even minor (but revealing) episodes need to be studied, such as the case of the Roman bricklayer who proved to a presumably stupefied Johann Joachim Winckelmann that the "tiny, flat stone" between the fingers of a statue discovered at Porto d'Anzio was actually "the stopper of an ampulla."<sup>86</sup>

The systematic gathering of these "small insights," as Winckelmann calls them on another occasion,<sup>87</sup> nourished, between the waning eighteenth and early nineteenth centuries, the new formulations of ancient lore – from cooking to hydrology and veterinary medicine. For an increasingly large number of readers, access to specific experiences was mediated by means of the printed page. The novel actually provided the bourgeoisie with both a substitute for and reformulation of initiation rites – that is, for access to experience in general.<sup>88</sup> And thanks precisely to the literature of imagination, the conjectural paradigm enjoyed new and unexpected success in this period.

I mentioned earlier, in connection with the probable venatic origin of



the conjectural paradigm, the oriental fable of the three brothers who described an animal they had never seen by interpreting a series of clues. The story first appeared in the West in the collection of Giovanni Sercambi.<sup>89</sup> It reappeared as the centerpiece of a much larger anthology of stories, presented as translations from Persian into Italian by a certain Cristoforo the Armenian, published in Venice in the mid-sixteenth century with the title *Peregrinaggio di tre giovani figliuoli del re Serendippo*. In this version the book was reprinted and translated several times – first into German and then, in the course of the eighteenth century, riding that wave of interest for things oriental, into the principal European languages.<sup>90</sup> The story of the sons of King Serendippo enjoyed such great success that it led Horace Walpole in 1754 to coin the neologism *serendipity* to designate the “making [of] discoveries, by accidents and sagacity, of things which they were not in quest of.”<sup>91</sup> A few years earlier Voltaire, in chapter 3 of *Zadig*, had revised the first novella in the *Peregrinaggio*, which he had read in the French translation. In Voltaire’s version the camel of the original had become transformed into a bitch and a horse, which Zadig succeeded in describing minutely by deciphering their tracks on the ground. After he was accused of theft and conducted before the judges, Zadig exculpated himself by recounting out loud the mental process which had enabled him to sketch the portrait of two animals he had never seen: “I saw on the sand the tracks of an animal, and I easily judged that they were those of a little dog. Long, shallow furrows imprinted on little rises in the sand between the tracks of the paws informed me that it was a bitch whose dug was hanging down, and that therefore she had had puppies a few days before.”<sup>92</sup> These lines, and those which followed, were the embryo of the mystery novel. They inspired Poe, Gaboriau, and Conan Doyle – the first two directly, the third perhaps indirectly.<sup>93</sup>

The reasons for the extraordinary success of the detective story are well known. I shall discuss some of them below. I can observe straightaway, however, that the genre was based on a model of learning that was both very ancient and modern. I have already talked about its distant roots in antiquity. As for its modernity, it will suffice to cite the page on which Georges Cuvier extolled the methods and successes of the new science of paleontology:

Today, anyone who sees only the print of a cloven hoof might conclude that the animal that had left it behind was a ruminator, and this conclusion is as certain as any in physics and in ethics. This footprint alone, then,

provides the observer with information about the teeth, the jawbone, the vertebrae, each leg bone, the thighs, shoulders and pelvis of the animal which had just passed: it is a more certain proof than all Zadig’s tracks.<sup>94</sup>

A more precise sign, perhaps, but one that was also closely allied. The name “Zadig” had taken on such symbolic value that in 1880 Thomas Huxley, on a lecture tour to publicize Darwin’s discoveries, defined as “Zadig’s method” that procedure which combined history, archaeology, geology, physical astronomy, and paleontology: namely, the ability to forecast retrospectively. Disciplines such as these, profoundly diachronic, could not avoid turning to the conjectural or divinatory paradigm (and Huxley spoke explicitly of divination directed toward the past),<sup>95</sup> discarding the Galileian model. When causes cannot be reproduced, there is nothing to do but to deduce them from their effects.

### III

We could compare the threads of this research to the threads in a carpet. We are at a point where we see them arranged in a tight, homogeneous weave. The consistency of the design is verifiable by casting an eye over the carpet in various directions. Vertically, we would have a sequence of the type Serendippo-Zadig-Poe-Gaboriau-Conan Doyle. Horizontally, we find at the beginning of the eighteenth century a certain Monsieur J.-B. Dubos listing, one after another in decreasing order of unreliability, medicine, connoisseurship, and the identification of scripts.<sup>96</sup> Diagonally, even, jumping from one historical context to another – over the shoulder of Monsieur Lecoq feverishly crossing an “expanse of earth, covered with snow,” dotted with the tracks of criminals, comparing it to “an immense white page upon which people we are in search of have written, not only their movements and their goings and comings, but their secret thoughts, the hopes and anxieties that agitated them,”<sup>97</sup> we shall see emerging authors of physiognomy treatises, Babylonian soothsayers deciphering messages composed by the gods on rocks or in the heavens, and Neolithic hunters.

The carpet is the paradigm that, as I went along, I have called, depending on the context, venatic, divinatory, conjectural, or semiotic. These, clearly, are not synonymous adjectives, but nonetheless refer to a common epistemological model, expressed



through various disciplines that are frequently linked by borrowed methods or key terms. Then, between the eighteenth and nineteenth centuries, with the emergence of the "humane sciences," the constellation of conjectural disciplines changed profoundly: new stars were born and quickly fell, such as phrenology, or experienced great success, as did paleontology.<sup>98</sup> But it is medicine, above all others, which assumes a preeminent position, thanks to its prestige epistemologically and socially. All the "humane sciences" attempt to relate themselves to it, explicitly or implicitly. But to which side of medicine? In mid-nineteenth century we see choices emerging: the anatomical model on the one hand, the semiotic on the other. The metaphor "anatomy of society," employed even by Marx in a crucial passage,<sup>99</sup> expresses the admiration for systematic knowledge in an age which had witnessed the collapse of the last great system, the Hegelian. But in spite of Marx's great success, the humane sciences increasingly ended up accepting (with one notable exception, as we shall see) the conjectural paradigm of semiotics. And here we return to the trio Morelli, Freud, and Conan Doyle with which we began.

Thus far I have spoken of a conjectural paradigm and its synonyms in a broad sense. It is now the moment to dismember it. It is one thing to analyze footprints, stars, feces, sputum, corneas, pulsations, snow-covered fields, or cigarette ashes; it is quite another to examine handwriting or paintings or conversation. There is a basic difference between nature, inanimate or living, and culture – certainly greater than the infinitely more superficial and mutable differences that exist between individual disciplines. Morelli set out to identify, within a culturally conditioned system of signs such as the pictorial, those which appeared to be involuntary, as is the case with symptoms (and the majority of clues). And in these involuntary signs, in the "material trifles" – a calligrapher might call them "flourishes" – comparable to "favorite words and phrases" which "most people introduce into their speaking and writing unintentionally, often without realizing it," Morelli recognized the surest clue to an artist's identity.<sup>100</sup> He was thus resurrecting (indirectly perhaps)<sup>101</sup> and further developing methodological principles which had been formulated much earlier by his predecessor, Giulio Mancini. It was no accident that these principles should finally reach maturity after so long a time. In this very period there had emerged an ever more visible trend consisting of closer control of society by the state, employing a conception of the

individual which also was based on small and involuntary traits.

Every society feels the need to distinguish its essential elements; but the way this need is approached varies with time and place.<sup>102</sup> There is the name first of all: but the more complicated a society, the more a name is inadequate to circumscribe an individual's identity unambiguously. In Greco-Roman Egypt, for example, a person standing before a notary for the purpose of contracting matrimony or concluding a commercial transaction was required to have a short physical description recorded next to his name, including mention of any scars or other particular marks.<sup>103</sup> The chances of error or fraudulent substitution of persons remained high just the same. In contrast, a signature at the bottom of contracts offered many advantages: at the end of the eighteenth century, the abbot Lanzi, in a passage from his *Storia pittorica* devoted to the methods of connoisseurship, stated that the inimitability of individual handwriting had been intended by nature "to safeguard" "civil [i.e., bourgeois] society."<sup>104</sup> Certainly signatures could be falsified, and illiterates were excluded from this form of control. But in spite of these drawbacks, century after century, European societies did not feel the need for more secure and practical methods for determining identity – not even when the birth of large factories, the geographical and social mobility that came with them, and the rapid rise of cities radically altered the terms of the problem. And yet even under conditions such as these, to cover one's tracks and reemerge with a new identity was child's play – and not only in large urban centers the size of London and Paris. But it was not until the closing decades of the nineteenth century that new and competing systems of identification began to be proposed from various quarters. The need erupted from contemporary events connected with the struggle between the classes: the birth of an international association of workers, the repression of working-class movements after the Commune, changes in the perception of crime.

The emergence of new capitalist methods of production – in England from circa 1720 on,<sup>105</sup> and in the rest of Europe almost a century later, with the advent of the Napoleonic code – spawned legislation, tied to a new bourgeois concept of property, which increased the number of punishable crimes and the gravity of the penalties. This criminalization of the class struggle was accompanied by the creation of a penal system based on long detention.<sup>106</sup> But prisons produce criminals. The number of recidivists in France,



constantly on the rise after 1870, had reached a percentage by the end of the century equal to half of indicted criminals.<sup>107</sup> The problem of identifying these backsliders constituted the more or less conscious bridgehead for the comprehensive program of social control which followed.

For the proper identification of recidivists it was necessary to prove (a) that an individual had been condemned previously and (b) that he was the same person as the one who had already been thus sentenced.<sup>108</sup> The first point was resolved by the creation of police files. The second presented more serious difficulties. The old punishments which stamped a person forever through branding or mutilation had been abolished. The fleur-de-lis burned into Milady's shoulder permitted D'Artagnan to recognize her as a convicted poisoner – while two escapees, Edmond Dantés and Jean Valjean, succeeded in reappearing in society under false, respectable names (these examples should suffice to demonstrate how great an impression the figure of the relapsed criminal exercised on the nineteenth-century imagination).<sup>109</sup> Bourgeois respectability demanded signs of recognition that were just as indelible, if less sanguinary and degrading, as those of the *ancien régime*.

The idea of an enormous criminal photographic archive was rejected at first because it posed unsolvable problems of classification: how was one to isolate distinct features in the continuum of an image?<sup>110</sup> The quantification route seemed simpler and more precise. In 1879, Alphonse Bertillon, an employee in the Paris prefecture, began to employ an anthropometric method (which he explained in various articles and memoranda)<sup>111</sup> based on minute bodily measurements recorded on a personal file. Clearly, an error of just a few millimeters created the possibility of judicial error. But the principal defect in Bertillon's anthropometric method was its purely negative quality. It permitted the exclusion, at the moment of identification, of individuals not corresponding to the data, but not the positive verification that two identical series of data referred to a single individual.<sup>112</sup> The unavoidably elusive nature of the individual, chased out through the door by means of quantification, was reentering by the window. Thus, Bertillon proposed to integrate the anthropometric method with the so-called "spoken portrait," namely the verbal, analytical description of the separate entities (nose, eyes, ears, etc.), the sum total of which should have restored the image of the individual – thereby permitting the process of identification. The pages filled with ears exhibited by Bertillon cannot help but recall the

illustrations in Morelli's own works appearing at about this time.<sup>113</sup> There may not have been a direct influence: however, it is striking to see that Bertillon, in the course of his activity as expert graphologist, used as clues revealing falsification the peculiarities or "idioms" of the original which the counterfeiter seldom succeeded in reproducing, but might substitute with his own.<sup>114</sup>

As may be supposed, Bertillon's method was incredibly complex. I have already alluded to the problem posed by measurements. The "spoken portrait" complicated matters still more. How was one to distinguish, in the description, a humped-curved nose from a curved-humped one? How did one classify the nuances of blue-green eyes?

It was F. Galton who suggested, beginning with his paper published in 1888, which he subsequently revised and improved, a method of identification that simplified both the collecting of data as well as its classification.<sup>115</sup> The new technique was based on fingerprinting. But Galton honestly acknowledged that, both theoretically and practically, he had been preceded in this by others.

The scientific analysis of fingerprints had been begun in 1823 by the founder of histology, J. E. Purkyně, in his *Commentatio de examine physiologico organi visus et systematis cutanei*.<sup>116</sup> He identified and described nine basic types of papillary lines, simultaneously claiming, however, that there are no two individuals with identical fingerprints. The practical applications to which the discovery could be put were ignored, although its philosophical implications were discussed in a chapter entitled "De cognitione organismi individualis in genere."<sup>117</sup> Knowledge of the individual, Purkyně stated, is crucial in the practice of medicine, beginning with diagnosis: symptoms reveal themselves differently in individuals and thus must be treated in different ways. Thus, some modern scholars, whom he does not name, have defined medicine as the "art of individualizing" ("artem individualisandi," "die Kunst des Individualisirens"). But the foundations of this art rest on the physiology of the individual. Here, Purkyně, who had studied philosophy in Prague as a young man, was rediscovering the deepest current in the thought of Leibniz. Each person, "ens omnimodo determinatum," has an individuality recognizable even in its most imperceptible and infinitesimal characteristics. Neither the facts of a particular case nor external influences suffice to explain it. It is necessary to posit the existence of an internal norm or "typus" which maintains the variety of organisms within the limits of each species. Awareness of this "norm," Purkyně declared prophetically,



“would reveal the hidden knowledge of individual nature.” The error of physiognomics had been to confront the variety of individuals from the viewpoint of preconceived opinions and hasty conjectures: consequently, it had been impossible up to this point to establish physiognomics on a scientific, descriptive basis. Abandoning the reading of hands to the “vain science” of palmistry, Purkyně focused his attention on a much less visible fact, and he discovered the secret mark of individuality in the lines imprinted on the tips of the fingers.

Let us leave Europe for a moment and pass on to Asia. In contrast to their European colleagues, and completely independently of them, Chinese and Japanese soothsayers had become interested in the not-so-obvious markings on the surface of the hand. The custom, verified for China, and especially Bengal, of pressing a fingertip blackened with pitch or ink on letters and documents<sup>118</sup> probably had behind it a series of factors of a divinatory nature. Anyone accustomed to deciphering mysterious writings in the veins of wood or rock, or in the tracks left by birds or in drawings impressed on turtle shells,<sup>119</sup> could have easily accepted as writing the lines imprinted by a dirty fingertip on any sort of surface. In 1860 Sir William Herschel, chief administrator in the Hooghly district of Bengal, noticed that this custom was widespread among the local population, appreciated its possible utility, and decided to put it to work for the benefit of the British government. (He was not interested in the theoretical aspects of the question; he did not know of Purkyně’s Latin treatise, which had lain unread for half a century.) As Galton observed retrospectively, there was a real need for an efficient method of identification in the British colonies, and not in India alone: natives were illiterate, quarrelsome, cunning, deceitful, and, in the eyes of a European, indistinguishable. Herschel announced in an 1880 issue of *Nature* that after seventeen years of testing, fingerprinting had been officially introduced in the Hooghly district and had now been in force for three years with excellent results.<sup>120</sup> Imperial officials had appropriated the conjectural knowledge of the Bengalese and turned it against them.

Galton took Herschel’s article as the point of departure for systematically rethinking and examining the entire question. The confluence of three very different elements made his investigation possible: the discovery made by Purkyně, a pure scientist; concrete knowledge, linked to the daily practice of the people of Bengal; and the political and administrative good sense of Sir William Herschel, a faithful servant of Her Britannic Majesty. Galton paid homage to the

first and to the third. He also attempted to distinguish racial peculiarities in the fingertips, but without success; he declared, however, that he would pursue the research on Indian tribes in the hope of discovering there “a more monkey-like pattern.”<sup>121</sup>

Galton, in addition to making a decisive contribution to fingerprint analysis, had also foreseen its practical implications. In a very short time the method was introduced in England, and from there little by little spread throughout the world (France was one of the last countries to accept it). In this way, every human being – Galton observed proudly, applying to himself praise pronounced for Bertillon by an official in the French Ministry of the Interior – acquired an identity, an individuality which could be relied upon with lasting certainty.<sup>122</sup>

And so, what had been until recently, in the eyes of British administrators, an indistinct mass of Bengalese “snouts” (to use Filarete’s disparaging term) became at one stroke individuals, each one distinguished by a specific biological mark. This prodigious extension of the concept of individuality was in fact occurring by means of the State, its bureaucracy and police. Thanks to the fingerprint, even the least inhabitant of the poorest village of Asia or Europe was now identifiable and controllable.

But the same conjectural paradigm employed to develop ever more subtle and capillary forms of control can become a device to dissolve the ideological clouds which increasingly obscure such a complex social structure as fully developed capitalism. Though pretensions to systematic knowledge may appear more and more far-fetched, the idea of totality does not necessarily need to be abandoned. On the contrary, the existence of a deeply rooted relationship that explains superficial phenomena is confirmed the very moment it is stated that direct knowledge of such a connection is not possible. Though reality may seem to be opaque, there are privileged zones – signs, clues – which allow us to penetrate it.

This idea, which is the crux of the conjectural or semiotic paradigm, has made progress in the most varied cognitive circles and has deeply influenced the humane sciences. Minute paleographical details have been adopted as traits permitting the reconstruction of cultural exchanges and transformations – with explicit allusions to Morelli which sealed the debt Mancini had incurred with Allacci almost three centuries earlier. The depiction of flowing vestments in Florentine Quattrocento painters, the neologisms of Rabelais, the



cure of scrofula patients by the kings of France and England, are only a few examples of how slender clues have been adopted from time to time as indications of more general phenomena: the world view of a social class, a single writer, or an entire society.<sup>123</sup> A discipline such as psychoanalysis came into being, as we have seen, around the hypothesis that apparently negligible details could reveal profound phenomena of great importance. The decline of systematic thought has been followed by the success of aphoristic reasoning – from Nietzsche to Adorno. The very term *aphoristic* is in itself revealing. (It is a clue, a symptom, a lead: there is no getting away from the paradigm.) *Aphorisms* was, in fact, the title of a famous work by Hippocrates. In the seventeenth century, collections of political aphorisms began to appear.<sup>124</sup> Aphoristic literature is, by definition, an attempt to formulate evaluations of man and society on the basis of symptoms and clues: a man and a society that are sick, *in crisis*. And even *crisis* is a medical, Hippocratic term.<sup>125</sup> It can easily be demonstrated that one of the greatest novels of our century, Proust's *Recherche*, was constructed according to a scientific conjectural paradigm.<sup>126</sup>

But can we actually call a conjectural paradigm scientific? The quantitative and antianthropocentric orientation of natural sciences from Galileo on forced an unpleasant dilemma on the humane sciences: either assume a lax scientific system in order to attain noteworthy results, or assume a meticulous, scientific one to achieve results of scant significance. Only linguistics has succeeded, during the course of the present century, in escaping the quandary, subsequently posing as a more or less finished model for other disciplines.

The question arises, however, whether exactness of this type is attainable or even desirable for forms of knowledge most linked to daily experience – or, more precisely, to all those situations in which the unique and indispensable nature of the data is decisive to the persons involved. It was once said that falling in love is the act of overvaluing the marginal differences which exist between one woman and another (or between one man and another). But this can also be said about works of art or about horses.<sup>127</sup> In such situations the flexible rigor (pardon the oxymoron) of the conjectural paradigm seems impossible to suppress. These are essentially mute forms of knowledge in the sense that their precepts do not lend themselves to being either formalized or spoken. No one learns to be a connoisseur

or diagnostician by restricting himself to practicing only preexistent rules. In knowledge of this type imponderable elements come into play: instinct, insight, intuition. I have scrupulously refrained up to now from bandying about this dangerous term, *intuition*. But if we really insist on using it, as synonymous with the lightning recapitulation of rational processes, we shall have to distinguish a *low* from a *high* form of intuition.

Ancient Arabic physiognomics was rooted on *firâsa*, a complex notion which, in general, designated the ability to pass, on the basis of clues, directly from the known to the unknown.<sup>128</sup> The term came from the vocabulary of the *sufi* and designated mystical intuitions as well as forms of discernment and wisdom that were attributed to the sons of the king of Serendipity.<sup>129</sup> In this second meaning *firâsa* was none other than the instrument of conjectural knowledge.<sup>130</sup>

This “low intuition” is based on the senses (though it skirts them) and as such has nothing to do with the suprasensible intuition of the various nineteenth- and twentieth-century irrationalisms. It can be found throughout the entire world, with no limits of geography, history, ethnicity, sex, or class – and thus, it is far removed from higher forms of knowledge which are the privileged property of an elite few. It is the property of the Bengalese, their knowledge having been expropriated by Sir William Herschel; of hunters; of sailors; of women. It binds the human animal closely to other animal species.



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